**What you need to know form the Lectures:**

**[However, read the entire Lectures 7, 8, 9 & 10 for terminology, etc.]**

1. Linear Planar (= 2D) Systems: *X’ = AX*

A picture containing chart

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1. NONlinear Dynamical System in 1D: *x’ = f(x)*

Text, letter

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1. NONlinear Planar (= 2D) Systems

Diagram

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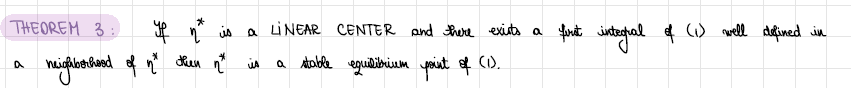
Text

Description automatically generated with low confidence

Stability is discussed separately in the two (**hyperbolic** & **non-hyperbolic**) cases:

Calendar

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1. How to find a **First Integral** for a Planar (Nonlinear) System

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1. How to find the general solution of a LINEAR system (with one off-diagonal zero)

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